

This listing of claims will replace all prior versions, and listings, of claims in the application:

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**Listing of Claims:**

1 1. (previously presented): A magnetic head comprising:  
2 a write head portion including a first magnetic pole and a second magnetic pole;  
3 an induction coil being disposed at least in part between said first and second magnetic  
4 poles;  
5 an electrical lead of said induction coil having an electrical lead thickness and being  
6 disposed in a layer of the magnetic head;  
7 a heat sink being disposed within said layer and being coplanar within the magnetic head  
8 with said electrical lead of said coil, said heat sink having a heat sink thickness that is equal to  
9 said electrical lead thickness.

1 2. (original): A magnetic head as described in claim 1 wherein said electrical lead is  
2 comprised of copper and said heat sink is comprised of copper.

1 3. (previously presented): A magnetic head as described in claim 1 wherein said heat sink  
2 is disposed at least in part directly upon said second magnetic pole.

1 4. (original): A magnetic head as described in claim 1 wherein said electrical lead is  
2 fabricated upon an insulation layer that is disposed in part above said second magnetic pole, and  
3 wherein said heat sink is fabricated upon said insulation layer above said second magnetic pole.

1 5. (original): A magnetic head as described in claim 4 wherein said heat sink includes a  
2 first substantial portion that is disposed above said second magnetic pole, and another substantial  
3 portion that is disposed away from said second magnetic pole.

1 6. (original): A magnetic head as described in claim 5 wherein said heat sink is disposed  
2 away from an air bearing surface of the magnetic head.

1 7. (currently amended): ~~A magnetic head as described in claim 1~~ A magnetic head  
2 comprising:  
3 a write head portion including a first magnetic pole and a second magnetic pole;  
4 an induction coil being disposed at least in part between said first and second magnetic  
5 poles;  
6 an electrical lead of said induction coil being disposed in a layer of the magnetic head;  
7 a first heat sink being coplanar within the magnetic head with said electrical lead of said  
8 coil and ~~further including~~ a second heat sink, and wherein said first heat sink and said second  
9 heat sink are thermally interconnected by a heat sink interconnect member.

1 8. (original): A magnetic head as described in claim 7 wherein said second heat sink is  
2 disposed below said first magnetic pole.

1 9. (currently amended): A magnetic head as described in claim 8 wherein said first heat  
2 sink is thermally interconnected through an interconnect member with a slider body portion of  
3 the magnetic head.

1 10. (currently amended): A magnetic head as described in claim 8 wherein said first heat  
2 sink is thermally interconnected with said second heat sink through an interconnect member, and  
3 said second heat sink is thermally interconnected with said slider body through a second  
4 interconnect member.

1 11. (original): A magnetic head as described in claim 1 wherein said magnetic head is a  
2 longitudinal head.

1 12. (original): A magnetic head as described in claim 1 wherein said magnetic head is a  
2 perpendicular magnetic head.

1 13-20 (cancelled):

1 21. (previously presented): A hard disk drive, comprising:  
2 at least one hard disk being adapted for rotary motion upon a disk drive;  
3 at least one slider device having a slider body portion being adapted to fly over said hard  
4 disk;  
5 a magnetic head being formed on said slider body for writing data to said hard disk, said  
6 magnetic head including:  
7 a write head portion including a first magnetic pole and a second magnetic pole;  
8 an induction coil being disposed at least in part between said first and second magnetic  
9 poles;  
10 an electrical lead of said induction coil having an electrical lead thickness and being  
11 disposed in a layer of the magnetic head;

12 a heat sink being disposed within said layer and being coplanar within the magnetic head  
13 with said electrical lead of said coil, said heat sink having heat sink thickness that is equal to said  
14 electrical lead thickness.

1 22. (currently amended): A hard disk drive as described in claim 21 wherein said heat sink is  
2 disposed at least in part directly upon said second magnetic pole.

1 23. (previously presented): A hard disk drive as described in claim 21 wherein said electrical  
2 lead is fabricated directly upon an insulation layer that is disposed in part above said second  
3 magnetic pole, and wherein said heat sink is fabricated upon said insulation layer above said  
4 second magnetic pole.

1 24. (currently amended): ~~A hard disk drive as described in claim 21~~ A hard disk drive,  
2 comprising:  
3 at least one hard disk being adapted for rotary motion upon a disk drive;  
4 at least one slider device having a slider body portion being adapted to fly over said hard  
5 disk;  
6 a magnetic head being formed on said slider body for writing data to said hard disk, said  
7 magnetic head including:  
8 a write head portion including a first magnetic pole and a second magnetic pole;  
9 an induction coil being disposed at least in part between said first and second magnetic  
10 poles;  
11 an electrical lead of said induction coil being disposed in a layer of the magnetic head;

12        a first heat sink being coplanar within the magnetic head with said electrical lead of said  
13 coil and further including a second heat sink, and wherein said first heat sink and said second  
14 heat sink are thermally interconnected by a heat sink interconnect member.

1    25.    (original): A hard disk drive as described in claim 24 wherein said second heat sink is  
2    disposed below said first magnetic pole.

1    26.    (currently amended): A hard disk drive as described in claim 25 wherein said first heat  
2    sink is thermally interconnected through an interconnect member with a slider body portion of  
3    the magnetic head.

1    27.    (currently amended): A hard disk drive as described in claim 25 wherein said first heat  
2    sink is thermally interconnected with said second heat sink through an interconnect member, and  
3    said second heat sink is thermally interconnected with said slider body through a second  
4    interconnect member.